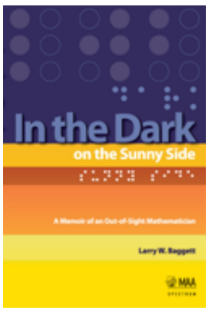
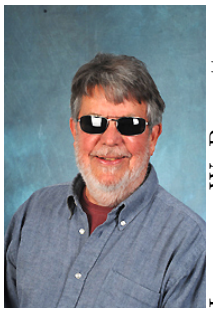
In the Dark on the Sunny Side: A Memoir of an Out-of-Sight Mathematician, 2012, Mathematical Association of America, ISBN 978-0-88385-581-2 (hbk), 206 pp. MAA Spectrum Series, by *Larry Baggett*.





Lawrence W. Baggett

Five year old Lawrence W. Baggett accidentally cut himself (he claims it is a design error of Darwinian evolution that arranges bone lengths in a human arm such that if you cut something at eye level, the knife will end up in your own eye). By sympathetic ophthalmia, he lost sight in his other eye as well, which left him totally blind apart from some vague distinction between light and dark.

That was 1944, and in those days, mainstreaming people with some bodily malfunction was not as usual as it is today. However, his mother was very determined and could convince some teachers to take her son along in the class with the other kids. Similar things happened later when he continued his education. He was always lucky to be the first blind person who was accepted in a regular program. He finally got a PhD at the University of Washington in 1966 on unitary representations of compact groups. After that he was hired by the University of Boulder where he had 12 PhD students.

With the technology available to us today, such as computers, audio-books and TEX, we can imagine a blind person writing a paper, but this was not at all obvious forty years ago. At first Braille typewriters were very primitive, and even when they improved, there was no erase button. Hence it required a lot of re-typing. Some books were available in Braille, others were later audio-recorded. For reading a paper he was depending on somebody reading it out for him. He tells us many other things that a blind person has to deal with, like traveling, finding your way in an unfamiliar city, crossing streets with heavy traffic, finding an empty seat in the audience, using a self-service counter, or the use of public toilets, and obviously how to lecture in a theater for a group of sighted students. Baggett takes us along on this journey, embedded with a sauce of gratefulness and a lot of humour. His hilarious evocation for example of what may happen when an unsighted man in a public lavatory is looking for a free toilet booth or when he bumps into the rear of a peer (or is there an 'e' missing) looking for a free urinal. Just a quote to illustrate his tongue-in-cheek phrasing *"It is known to people who do research on blindness that most blind men and women can't accurately walk a straight line, which I suppose explains why so many of us get drunk-driving tickets"*. Until late in life, he avoids being exposed as a blind person and act as sightedly as possible. That may be the reason that he never used a guide dog (at least he never mentions one in this memoir), although he came around to using a cane.

Baggett takes us along the successive stages of his personal life and of general history (e.g. the 'revolutionary sixties', the day JFK was shot, etc.). He tells about his escapades as a student, the "girly-thing" as a teenager, how he travelled to Sweden (partly inspired by the reputation of Swedish girls), how he met his first wife, and how he later remarried with his current wife, and how he got along after being elected as head of the math department in Boulder. It is remarkable how often the reader is almost forgetting that this is a blind person telling this story. He tells about the movies he has *watched*, the paintings he has *seen* in a museum, etc. but these words get a slightly different meaning, obviously.

Besides mathematics, music has been another lifelong passion of his. He has played in several bands as a youngster and continued to do so during his later career. Both of these passions are illustrated not only by his story, but there are several framed text blocks inserted that elaborate on some of the topics that he mentions. These are not really advanced, but discuss things like the number of possibilities in a set of 6-6 domino tiles (inspired by the 163 possibilities formed by a 6 by 2 dot matrix of the Braille alphabet), or the comma of Pythagoras, the sequence of musical chords, the limit of a sequence of numbers, the irrationality of $\sqrt{2}$, mathematical induction, etc. Sometimes he just challenges the reader giving a question of an IQ test he had to do: what is the next number in the sequence 6, 42, 7, 12, 48, 16, 18.

This account is indeed 'on the sunny side' (and this probably refers to the jazz standard song 'On the sunny side of the street' performed by many if his much admired jazz heros). Apart from his accident as a child, Baggett may have been lucky at many other instances of his life, nevertheless this book testifies that, even 'in the dark' it is possible by using one's creativity and perseverance to achieve remarkable things in life.

Adhemar Bultheel